

REMARKS/ARGUMENTS

The amendment to Claim 1 is supported by original Claim 3. Original Claim 3 also supports new Claims 13 and 14. No new matter has been entered.

The rejection over Tipton in view of Watts is traversed.

The present invention relates to a lubricating oil composition comprising a base oil comprising at least one compound selected from the group consisting of:

(i) dimerized norbornanes, and

(ii) hydrogenated dimers, trimers and tetramers of norbornanes and/or norbornenes and having a kinematic viscosity at 40°C of 5 to 150 mm<sup>2</sup>/s, and a phosphoric ester containing a hydrocarbon group having a thioether bond. Tipton, while mentioning hydrogenated products of dimers, trimers, or tetramers of norbornanes and /or norbornenes at column 3, lines 20-21,<sup>1</sup> nowhere uses these materials in any of the examples thereof and admittedly lacks any disclosure with regard to Applicants' presently claimed phosphoric ester containing a hydrocarbon group having a thioether bond.

Watts is cited for the disclosure of such a phosphoric ester. However, and importantly, Watts nowhere discloses or suggests hydrogenated dimers, trimers or tetramers of norbornanes and/or norbornenes, as disclosed in Tipton, for use in the disclosed zinc-free continuously variably transmission fluid. Instead, the base oils in Watts, while extensively described, differ distinctly from the presently claimed base oil.

Thus, there is no indication in the disclosures of Tipton and Watts that the combination of a base oil as presently claimed that comprises at least one compound selected from the group consisting of dimerized norbornanes and hydrogenated dimers, trimers and tetramers of norbornanes and/or norbornenes in combination with a phosphoric ester

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<sup>1</sup> The nonhydrogenated dimerized norbornanes of amended Claim 3 are nowhere described in the reference.

containing a hydrocarbon group having a thioether bond could or should be used, or that such a combination would produce a composition useful for any purpose.

Moreover, and in addition to the lack of a *prima facie* case, Applicants note that their presently claimed lubricating oil composition comprising specific base oil component (A) in combination with specific phosphoric ester component (B) herein unexpectedly exhibits excellent wear resistance even though it simultaneously exhibits a high metal-to-metal friction coefficient. This unique combination of properties is nowhere disclosed or suggested in either of Tipton or Watts, and thus the results discussed in the specification, and in more detail below, clearly are unexpected in view of the disclosures in these references.

Specifically, and as shown in Table 4-1 at specification page 27:

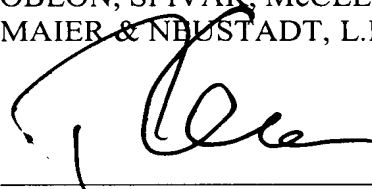
TABLE 4-1					
	Examples		Comparative Examples		
	2	3	4	5	6
Blending ratio (wt %)					
Base oil 1	99.6	97.1			
Base oil 2			97.1		
Base oil 3				97.1	
Base oil 4					97.1
Additive 1	0.4	0.4	0.4	0.4	0.4
Additive 2		2.5	2.5	2.5	2.5
Additive 3					
Additive 4					
Experimental results					
Traction coefficient at 100° C.	0.1020	0.0998	0.0552	0.0120	0.0050
Total friction coefficient					
Immediately after initiation of the test	0.13	0.133	0.123	0.117	0.117
After 60 min from initiation of the test	0.114	0.118	0.112	0.108	0.107
Wear width in block (mm)	0.71	0.75	0.74	0.83	0.82

The combination of present components (A) and (B) herein (Examples 2 and 3) exhibit a very high total friction coefficient as compared with Comparative Examples 4-6 using base oils different from that presently claimed (see specification page 25 for a description of the base oils and additives used). Normally, and based on these high total friction coefficients, one of ordinary skill in the art would expect wear width to be comparable to, or track, total friction - i.e., to be high as well. However, and as shown above, this is not the case with the presently claimed invention as the wear width obtained is essentially the same as, or lower than, that obtained for the comparative examples showing significantly lower metal-to-metal friction coefficients. This is completely contrary to anything disclosed or suggested by even the combination of references applied herein, and is fully supportive of the patentability of the pending claims.

Accordingly, and in view of the above amendments further detailing the particular components of Applicants presently claimed base oil (A) and the arguments and data provided above and in the original specification in support of the patentability thereof, Applicants respectfully submit that the present application is now in condition for allowance, and early notification to this effect is respectfully requested.

Respectfully submitted,

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